CLAIMS

What is claimed is:

1. A computed tomography scanner comprising:

a gantry;

an x-ray source mounted to the gantry;

an x-ray detector mounted to the gantry opposite the x-ray source; and

a motor mounted to the gantry.

2. The computed tomography scanner according to claim 1 further including a mounting plate secured to the motor, such that the motor imparts relative rotation between the mounting plate and the gantry

3. The computed tomography scanner of claim 2 wherein the motor is fixed to the gantry, such that the mounting plate rotates relative to the motor and gantry.

4. The computed tomography scanner of claim 3 wherein the motor also imparts translational movement of the gantry relative to the mounting plate.

5. The computed tomography scanner according to claim 1 further including a computer mounted to the gantry.

6. The computed tomography scanner according to claim 5 wherein the computer sends signals the motor to control the rotation of the gantry.

7. The computed tomography scanner of claim 5 wherein the computer controls the x-ray source.

8. The computed tomography scanner of claim 5 wherein the computer controls movement of the x-ray detector relative to the gantry.

9. The computed tomography scanner of claim 5 wherein the computer processes images collected from the x-ray detector.

10. The computed tomography scanner of claim 9 wherein the computer creates a three-dimensional model based upon the images collected from the x-ray detector.

11. The computed tomography scanner of claim 1 wherein the x-ray detector is movable relative to the gantry.

12. The computed tomography scanner of claim 1 wherein the gantry includes a housing in which the x-ray source is at least partially mounted.

13. The computed tomography scanner of claim 1wherein the x-ray source is a cone-beam x-ray source.

14. A computed tomography scanner comprising:

a gantry;

an x-ray source mounted to the gantry;

an x-ray detector mounted to the gantry opposite the x-ray source; and

a computer mounted to the gantry.

15. The computed tomography scanner of claim 14 wherein the computer controls the x-ray source.

16. The computed tomography scanner of claim 14 wherein the computer controls movement of the x-ray detector relative to the gantry.

17. The computed tomography scanner of claim 14 wherein the computer processes images collected from the x-ray detector.

18. The computed tomography scanner of claim 17 wherein the computer creates a three-dimensional model based upon the images collected from the x-ray detector.

19. The computed tomography scanner of claim 18 further including a wireless transmitter on the gantry, the transmitter transmitting the three-dimensional model from the computer.

20. The computed tomography scanner of claim 14 further including a mount rotatable relative to the gantry, the computer movable with the gantry relative to the mount.

21. A computed tomography scanner comprising:

a gantry;

an x-ray source mounted to the gantry;

an x-ray detector mounted to the gantry opposite the x-ray source;

a mount rotatably mounted to the gantry;

a motor mounted to at least one of the gantry and the mount, the motor selectively imparting relative motion between the mount and the gantry; and

a computer mounted to the gantry, the computer controlling rotation of the gantry relative to the mount by the motor, the computer controlling the x-ray source.

22. The computed tomography scanner of claim 21 wherein the computer processes images collected from the x-ray detector.

23. The computed tomography scanner of claim 22 wherein the computer creates a three-dimensional model based upon the images collected from the x-ray detector.

24. The computed tomography scanner of claim 23 further including a wireless transmitter on the gantry, the transmitter transmitting the three-dimensional model from the computer.

25. A method for imaging a portion of a body including the steps of:

a) positioning the body part between a source and a detector;

b) revolving the source and the detector about the body part;

c) taking a series of images from the detector from a plurality of positions about the body part during step b); and

d) storing the series of images in a first location revolving with the detector in step b).

26. The method of claim 25 further including the step of:

e) transmitting the series of images stored in said step d) after said steps a-d) to an off-board storage.

27. The method of claim 25 further including the step of:

e) generating a three-dimensional model of the body part from the series of images.

28. The method of claim 27 wherein said step e) is performed at a second location revolving with the detector in step b).

29. The method of claim 28 further including the step of:

f) transmitting the three-dimensional model to an off-board storage.

30. The method of claim 29 wherein said step f) includes the step of transmitting the three-dimensional model wirelessly.

31. The method of claim 27 wherein only a single complete revolution is performed in said step b) before the three-dimensional model is performed in said step e).

32. The method of claim 27 further including the step of translating the source and the detector about an axis of the revolution during said step b).